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Creating an Environment of Validation

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Human Resources and Democracy Division
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Schools Are for Girls Too

Executive Summary: The Challenge

Educating girls offers distinct advantages to them, their families, communities, and to the social and economic well-being of their nations. Nevertheless, a gap exists between the numbers of girls and boys enrolled in schools in many developing countries. An "environment of discouragement" is how Anderson-Leavitt, Bloch, and Soumare (1994) describe this setting, in which large numbers of girls must compete for an education. Qualitative research studies that focus on girls' experiences and gendered relations in classrooms reveal the male-centeredness of educational institutions and the myriad ways in which schools favor boys.

An examination of the characteristics of this male-centered environment of discouragement raises the question of what it means to provide a quality education for all students. Improving the overall quality of education requires that specific attention be paid to girls whose specific needs have been ignored, masked, or subsumed under the needs of "all" students. It also necessitates analyzing and re-envisioning teaching and learning processes and the entire enterprise of schooling through the lens of gender.

This paper provides an overview of the benefits of providing girls with formal education. It brings together findings from qualitative research done in developing countries, largely from Africa, that provide a textured portrait of the male-centered coeducational classroom. Details of this portrait include classroom interactions, teacher attitudes and expectations, assigned tasks and responsibilities, and the school organization in which teaching and learning are embedded. Considered together, the details portray an environment of discouragement. However, they also provide insight into what VanBelle-Prouty and Miske (1996) call an "environment of validation" for girls, and a quality learning environment for all children.

Developing this environment of validation requires new ways of thinking. We propose a gender-based approach to education policy planning and implementation (GAP), which contrasts sharply with the econometric research that, to date, has influenced much of the thinking and decision-making on girls and schooling. Key components of the GAP include: gathering and analyzing qualitative classroom and school-based data; utilizing classroom-based, pedagogically-focused information in creating and implementing policy at all levels of the education system; and making student- and school-related decisions with the active participation of teachers, administrators, parents, and community members. The final sections of the paper describe programs that contain elements of the GAP. In these projects and programs, educators, students, communities, and policymakers have begun to construct a quality educational environment for girls and boys.

The Benefits of Educating Girls

Social and Private Benefits

Econometric research studies underscore the benefits of educating girls (Cadwell 1979, 1986; Cochrane 1979; Floro and Wolfe 1990; King & Hill, 1991). Social benefits alone provide an enormous incentive to developing countries to educate girls. Educated women marry at an older age, have fewer children, and pursue better prenatal and neonatal care, thus reducing the infant mortality rate. Educated women have increased opportunities for income generation and productivity in both formal and informal

farm and nonfarm sectors; an improved standard of living; and improved hygiene, nutrition, and overall health care, all factors that improve infant survival and children's well-being (Browne & Barrett, 1991; King and Hill, 1991; Shapiro & Tambashe, 1994). Finally, educated women's daughters are as much as 40 percent more likely to enroll in school.

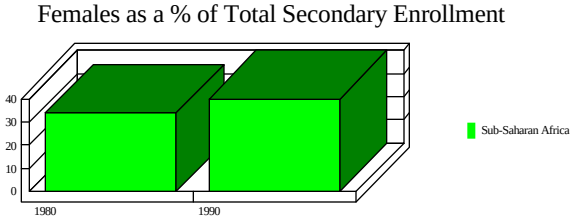
In contrast, the private rate of return for educating girls (individual benefits such as the ability to obtain better jobs) lags behind the social returns (benefits to society such as reduced infant mortality and higher economic growth rates), and correlates closely with a country's overall level of development. The social returns for educating girls appear to be nearly twice as large in Africa and Latin America as in industrially advanced, high-income countries (King and Hill, 1991). Nevertheless, improved macroeconomic growth can lead to new demands and opportunities for formal education—and an educated populace, in turn, contributes to the improved social and economic development of a nation.

Efforts to Address the Gender Gap

Attempts to address the inequity between boys and girls in terms of educational access, participation, and retention is not for want of effort by many education ministries. Ministries, donors, and nongovernmental organizations (NGOs) have designed initiatives that target girls' access to education. Supply- and demand-side strategies, such as scholarship programs, fee waivers, and better linkages between the school program and work place opportunities, address both the direct and indirect costs of schooling. Nontraditional approaches, such as flexible scheduling for the daily program of studies and for the academic calendar attempt to increase girls' participation in school. (For a more thorough discussion of strategies to enhance girls' schooling opportunities see Tietjen, 1991 or Odaga and Heneveld, 1995.)

The Persistent Gender Gap

Although ministries, donors, NGOs, and communities have exerted tremendous efforts and have utilized a broad range of options to address girls' education, the gender gap remains. For example, in regions of South Asia, girls' enrollment lags behind that of boys by 11 percent, and in the Middle East by over 20 percent (UNICEF, 1996). In sub-Saharan Africa, an average 61 percent of school age girls are enrolled in primary school, compared with 75 percent of the boys. The gap is increasingly apparent at the secondary level, where 14 percent of girls are enrolled compared with 21 percent of boys. Although the statistics from Africa are among the most severe, the percentage of girls in school lags, dramatically in some cases, behind boys in all developing countries except Eastern Asia and Oceania (SPESSA, 1995). Convincing evidence links the education of girls to improved gains in social and economic development. Yet the gender gap persists in many countries, particularly the poorest, which have the most to gain from educating their girls. Qualitative research data from school classrooms in developing countries compels us to consider new ways of dealing with the gender gap.



Source: SPESSA, 1995

The Environment of Discouragement

Qualitative research conducted in classrooms reveals common patterns and characteristics of girls' learning environments, which include teachers' interaction with students, their attitudes and beliefs about female and male

students; and the tasks and duties they assign. These patterns, which form an integral part of a school's hidden curriculum and affect students' learning outcomes, reveal much about gender and relationships of power and authority in the school environment.

Schools and classrooms are microenvironments in which cultural dynamics are inculcated and transformed. Students and teachers together, through verbal and nonverbal behaviors, create the classroom environment. Teachers are key figures—they set the subjects, ask questions about texts, assign work, and assert their ultimate authority when they evaluate students (Weiler, 1988). The following discussion is not an attempt to evaluate teachers, teaching, or students: the roles and work of teachers are complex, and they are embedded within even more complex historical, socio-political, and cultural contexts. Yet teachers are central figures at the micro-level of change and transformation in the classroom. Therefore, we focus on both their participation in creating an environment of discouragement and, in the discussion of the GAP, examine teachers' opportunities to construct an environment of validation.

Classroom Interactions

- Who asks for and who receives the teacher's attention?
- Do teachers interact more positively with girls or boys?

We begin the discussion of these and related questions by examining the verbal and nonverbal exchanges between teachers and students. We also consider the intensity and the nature of classroom exchanges between girls and boys over which the teacher has some control, e.g., boys taunting or teasing girls.

Boys Get More Attention

Classroom participation studies from Guatemala show that teachers of either sex initiated interactions with boys more frequently than with girls. Male students also initiated interactions more frequently with teachers and thus procured more of the teachers' attention (Nunez, 1995). Other studies point to the same pattern: teachers paid more attention to boys.

Teachers in southern Malawi called on boys significantly more often than they called on girls, regardless of the subject being studied or the sex of the teacher (Davison and Kanyuka, 1990). In a Nigerian level two primary class, teachers' positive instructional interactions with girls and boys were relatively equal. By level six, however, the number of teachers' positive instructional interactions with boys had increased significantly, from 18 to 27 percent, while positive interactions with girls remained constant at 19 percent (Biraimah, 1989). In level two classes, teachers reprimanded boys nearly twice as often as girls, but by level six the number of teachers' reprimands of boys had dropped dramatically, while negative responses toward girls' behavior remained constant.

Active Boys/Passive Girls; the Good Girl Image

The "good girl" image that girls develop in the early years of education reinforces their quiet demeanor and their invisibility in the classroom. By contrast, boys successfully manipulate the teachers' time and attention through their actions and their antics (see Davison and Kanyuka, 1992). VanBelle-Prouty (1991) found that, over time, Zairean and Rwandan teachers perceived boys as being more competent and scholarly students than girls. Wamahiu's (1994) review of the literature on the atmosphere of the classroom environment for girls in Africa concludes that girls' lack of involvement further marginalizes them in the classroom. Girls watched while boys took part in hands-on learning activities, particularly in the sciences and mathematics. Furthermore, even when girls attempted to interact—either positively or negatively—they frequently were ignored.

Classroom teachers in Guinea commonly focussed on the few "stars" in the class, thereby marginalizing the girls (Anderson-Leavitt, et al., 1994). Due to the disproportionate ratio of boys to girls in most classrooms, fewer girls were among the top students and therefore were less likely to be called upon. Girl students were not boisterous; they stood mutely when asked to respond, or they spoke in barely audible voices, even when they knew the answers to teachers' questions.Teachers, therefore, perceived the girls to be passive, and often ignored or overlooked them. Girls who did attempt to engage in academic activities did so halfheartedly, resting their elbows on the desk, hanging their hands and arms at half-mast. In contrast, the boys surrounding the girls waved their hands high, demanding the teacher's attention.

These attitudes were part of a self-fulfilling cycle. The girls who were less active in their learning style did less well in the competitive atmosphere of school. When teachers judged students on how aggressively they participated in the classroom, they concluded that passive girls were less able students. This, in turn, reinforced the stereotype that schools were not good places for girls and that girls did not deserve to be there. In addition, teachers' perceptions that girls chose not to involve themselves in classroom activities, absolved the teachers of any accountability for girls' academic performance in their classrooms. Teachers praised and encouraged the boys for doing what was expected of them and denigrated and devalued the girls for doing what was expected of them.

Acts of Silencing

The silencing of girls by their male peers and teachers was not uncommon. Teachers made comments such as, "Oh, girls say they do not know; let's move on to boys and see," or teachers responded in a shocked manner when a girl gave a right answer (Anderson-Leavitt et al., 1995). One of the more dramatic examples of this was observed in a secondary level classroom when a girl was ignored and thereby silenced when she tried to share with the class during a lesson on female circumcision:

> The sole girl raised her hand and held it up as the teacher continued to call on boys. Eventually a boy sitting behind her repeatedly pulled her arm down. She, however, persisted, raising her arm and rising in her place (Anderson-Leavitt et al., 1995, p. 11).

Eventually the teacher recognized the girl and called on her—but not before she had been subjected to a powerful lesson that her views were less valued than those of her male peers, even with regard to matters about which she held a unique perspective.

Biraimah (1989) observed a group of students reenact a teacher's physical and verbal abuse toward girl students. On one occasion she observed a young boy mimicking a teacher who had scolded the girl students. The boy yelled at three girl students and hit them on the head repeatedly, just as the teacher had done.

In the same study, teachers frequently noted the positive abilities of male students, while highlighting the marginality of female students:

> During a brief quiz at the beginning of class, the teacher identified one male student as being "a very intelligent boy" for finding an error in the teacher's quiz. Later, the teacher openly accused a girl of copying and took away her quiz....The teacher later initiated an oral discussion of the problems and called on a girl who did not know the correct answer. The entire class laughed at her, but later cheered a male student who completed the problem correctly (Biraimah, p. 59).

A remarkably similar kind of exchange in VanBelle-Prouty's (1991) research revealed that teachers commonly called on the least capable girl students to the board in front of the class to complete math questions. When the girls could not solve the problems successfully—as the teacher knew they would not—the teacher then asked one of the most capable boys in class to assist the girls. As the girls struggled to complete the math problems, the male teacher and boy students taunted the girls, suggesting that girls had spent too much time fixing their hair the previous evening and had not devoted enough time to the math assignment.

Girl students are not simply passive and quiet; they participate in classroom activities, answer questions, and may act assertively with their peers. Yet the silencing and the silences of girls, combined with the kinds and quality of interactions they engage in with their teachers and male peers, constructs and reinforces a classroom environment of discouragement for the very students who would benefit most from an environment of validation.

Teachers' Attitudes and Expectations

Teachers' attitudes about girls' abilities and roles influence how they deal with them in the classroom. Research suggests that women and men teachers have equally low expectations of girl students. VanBelle-Prouty (1991) identified a "push-pull" force that had a significant impact on the attitudes and behaviors of both men and women teachers in Rwandan classrooms. Teachers' belief that gender had little influence on the learning potential of boys and girls was a "push" for gender equity. But cultural norms that define gender roles and frame teachers' thinking about teaching practices were a "pull" that resulted in teachers defining clear gender expectations in their classrooms. These gender-defined boundaries also included the abuse of girl students.

Teachers' Perceptions of Girls and Boys as Students

Boys Are More Analytical

While the focus of this paper is the coeducational school environment, the teaching and learning enterprise in single-sex girls' schools also reflect and construct the male-centeredness of the education system. For example, in China's highly prestigious Shanghai #3 Girls' Middle School, teachers explained that "girls are at the top of the class in primary school, at the middle of the class in middle school, and at the bottom of the class in college" because of their natural inclination toward social interaction (Ross, 1993; p. 118). Teachers linked what they perceived to be girls' failure to develop abstract and logical thinking skills with their tendency to interact sociably and in caring ways. Rather than lauding social interaction and caring as strengths, teachers attempted through their pedagogy to counteract these tendencies. In so doing, teachers reinforced the message that areas of achievement are biologically fixed and that strengths and weaknesses are gender-related, with strengths defined by male characteristics.

Boys Work Harder

The literature suggests that teachers believe gender stereotypes such as girls' laziness, gossipy and indecisive natures, and lack of ambition as reasons why boys were better students. Examples include Malawi teachers who identified girls' immoral actions as one of the reasons that boys outperformed girls in the classroom (Davison and Kanyuka, 1990). Other teachers reported that girls were cooperative, easy to control, obedient, easy to work with, quiet, calm and submissive (Kainja & Mkandawire, 1991). While these characteristics can appear to favor girls and girls' learning, they can also severely limit learning opportunities in an aggressive and competitive, male-dominated classroom environment.

Both VanBelle-Prouty and Biraimah noted teachers' perceptions that girls wasted the teachers' time. This attitude was evident among all three women teachers in VanBelle-Prouty's (1991) work. They stated flatly that they did not have time in class to wait for the girls who "obviously" had elected to pursue activities other than their school work. One Rwandan teacher declared:

> The boys work harder—the girls don't really want to be here. Why should I waste my time with them? I have better things to do than try to teach someone who doesn't really want to be in school. If they do not want to work hard they should just leave and go to the fields or get married, because that's where they'll end up (p. 124).

In summary, these teachers perceived that boys worked harder and were more aggressive in their learning than girls, that boys were more scholarly, better leaders, and had greater potential and greater interest in school. These perceptions influenced the teachers' frequency and level of interaction with girl students (Biraimah, 1980; Kainja & Mkandawire, 1991; VanBelle-Prouty, 1991).

Task Assignment: Considering Power and Authority in Roles and Responsibilities

Although boys may receive the greatest share of attention during classroom instructional activities, when classroom responsibilities are assigned, girls assume the greatest share of the work load. This is true especially for responsibilities closely related to domestic or clerical tasks such as sweeping the floor, cleaning the board or latrines, picking up garbage, or handing out papers and supplies. In contrast, teachers more frequently assign responsibilities with a measure of authority or control to boys. These tasks include monitoring the classroom during a teacher's absence, taking messages to the principal or head teacher, serving in some kind of a leadership role such as a class chief, and assisting with the class role call. When boys failed to meet their obligations, however, teachers reassigned boys' tasks to the girls. That the girls so easily assumed these responsibilities may testify to their (perhaps reluctant) acceptance of their classroom duties as a harbinger of their future roles in the home.

"Ghanaian teachers encouraged girls to internalize the view that men have authority over women both at home and in the work place" (Wamahiu, 1994; p. 16). Possibly in no act is this gender-differentiated pattern of authority more apparent than in Malawi's schools, where girls assume the customary stance of going forward on their knees when turning in work or receiving punishments (Davison and Kanyuka, 1990; Wolf, 1995).

These differentiated lines of work and authority are so clearly demarcated in some classrooms that VanBelle-Prouty asserts girls take part in an apprenticeship for marriage. In this apprenticeship, girls model and internalize roles, responsibilities, and relationships of power and authority that will pervade their future roles as wives and mothers. In the coeducational classrooms of other African studies, teachers' and students' assumptions that girls' primary role and ambition was to be wives and mothers strongly influenced teacher-student conversations and interactions.

Gendered Nature of School Organizations

Educational systems and personnel management structures are not gender-neutral. Educational administrators at all levels reinforce the male-centered bias, and even introduce further discriminatory barriers. While women have to confront a number of obstacles in order to even become administrators, evidence suggests that the limited number of women educational administrators who have the opportunity to influence both policy and practice may also help perpetuate gender bias.

Nayar (n.d.) examined the roles of women administrators in developing countries and noted both the constraints on women and the multiple role conflicts women face because of gender bias. In a study of leadership opportunities for women teachers in Mexico, Cortina (1989) found that "informal networks of friendships and social relations that constitute the daily life of teachers act as a barrier in the promotion of women" (p. 365). In a U.S.-based study of women administrators, the administrators saw themselves as female exceptions and frequently chose to disassociate themselves from their women colleagues and from issues of women and girls in education. In order to be better integrated into the culture of men, the administrators chose to focus on their role as administrator rather than on their role as agents for change around gender issues (Schmuck and Schubert, 1995).

Despite evidence to the contrary, male teachers perceive that women teachers frequently contribute less to school activities, and bring a negative, divisive attitude to the workplace. (See Prouty and Hummon, 1994 or Government of Ghana, 1995.) This complex, gender-differentiated organizational structure and environment where women educators carry out their work complicates any attempt to address the gender bias for the girls in their schools.

The organizational gender bias of the education system, together with the male-centeredness of the classroom, the school, and the administrators, pose formidable challenges to creating an environment of validation. The GAP offers fresh insights into how to meet these challenges.

A Gender-Based Approach to Planning (GAP)

The GAP argues for a strategic shift from the dominant econometric perspective to a gender-focused pedagogical perspective. From this new perspective, the operative questions explore how teachers' and students' interactions and activities discourage girls from staying in school and marginalize those who manage to persist past the primary levels. This position draws extensively from qualitative research, allows us to construct a picture of the quality of what goes on in classrooms, and reveals the male-centeredness of educational institutions (Robertson, 1992; Mahoney, 1985).

To date, many programs that address gender equity are add-on programs or exist outside the mainstream. The programs are often underfunded, and their administration is relegated to a relatively remote part of the bureaucracy (Bah, 1993). (For a discussion of USAID-supported programs that focus on girls' participation in school in sub-Saharan Africa see Tietjen, 1995; for a more global perspective see Rawley, 1996.) General educational reform efforts, on the other hand, are often broad, ambitious, well-funded, and highly visible, but also often unsuccessful.

Key Elements of the GAP

Gender Focus and Girls as Proxy

GAP addresses both the participation of girls in schools and broader educational reforms in a new way. GAP builds on the work of VanBelle-Prouty (1993) and Prouty (1993), and proposes that the problems associated with schooling girls be taken as the proxy for the problems associated with schooling all children within the educational system. Instead of adapting to the current male-centered assumptions of the education system, the focus shifts to a gender-sensitive perspective. GAP stands the test of prima facie fairness: nothing in it inherently discriminates on the basis of gender or makes cultural assumptions as to the proper roles of women and men in a given society. A caveat is needed here that, as with any proxy, the use of this approach will not be appropriate for all situations. It is, however, a robust construct for addressing major problems facing the sector.

While the GAP begins with and focuses on the needs of the girls, "gender" does not equate with "girls." Rather, the GAP examines girls' access to and persistence in schools as contrasted with the boys; GAP also focuses on the quality of education as it is constructed through gendered relations in school classrooms and education systems.

Pedagogical Focus

Approaching educational planning from both a girls' and a pedagogical perspective assumes that girls' needs include or surpass the needs of all students, and that schools have been least effective in responding to girls' needs. These assumptions help us conceptualize the sector and to think about priority needs. The GAP thus allows a more effective examination of the needs of all children to obtain high-quality education.

Three major problems face many education systems: access, quality, and retention. The GAP can provide fresh insights into how best to tackle these problems. For example, a focus on girls' access, rather than overall or boys' access, requires a radically different approach from the traditional approaches of increasing access by hiring more teachers (or more women teachers), and building more schools in areas of low enrollment. Although these strategies would ultimately form part of the GAP, the GAP would perhaps be different because it requires first that parents and community members enter the dialogue as full participants. They would be part of the decision-making process about how schooling is organized; and greater flexibility would be allowed locally for parents' concerns to be understood and met. The GAP also requires that a fundamentally different perspective of the role of classrooms teachers be considered—one in which they are more actively involved in decisions about the curriculum, assessment and examinations, and local school management. The GAP will approach many other issues very differently as well.

Three Issues Viewed from GAP Perspective

Dropout Rates and Repetition

Many problems plaguing national education systems can be better understood from the gender perspective. For example, unlike boys, where dropout rates tend to be highest in the early years of school, dropout rates for girls accelerate dramatically as they approach childbearing age. This may have to do with early marriage, or parental fears of early pregnancy, or taboos related to menstruation, or parental concerns about investing in a "resource" that will soon no longer be paying dividends to them. Although these issues can be dealt with by publicity campaigns and attempts to change parental perceptions, the only meaningful approach in the medium term is to make sure that girls finish primary school before reaching childbearing age.

This means that the problem of grade repetition, which is often approached as an efficiency issue, could more effectively be understood as largely a gender issue. A gender perspective adds urgency to the problem, highlighting what cannot be addressed by giving preferential treatment to girls in progressing from grade to grade, but only by working with teachers to improve the overall quality of student learning. This approach ultimately favors learning by all students, both boys and girls.

While the problems of grade repetition and dropout for girls are related to out-of-school factors for which schools must make allowances, these problems are related to in-school factors as well. A gender approach would mean teaching teachers to be sensitive to how they interact with students. This approach would mean introducing classroom-based in-service programs to help teachers become more aware of their classroom management practices. The more typical model, in which itinerant school inspectors make occasional visits to schools,

would be replaced with a much more intensive and collaborative model to improve classroom management, with the school heads taking responsibility for the supervision of instruction and inspectorate personnel working almost exclusively with the school heads themselves.

The GAP would require much better information about student learning and classroom teaching than what currently exists, including gender-differentiated data and a finely discriminating school mapping capacity. A gender-based approach to primary schooling calls for much greater integration of health and education issues into the curriculum and into teaching because of the primary role that women play in the family's health care.

Women Teachers and Girls' School Participation

One case that illustrates clearly the importance of the GAP is the strategy of increasing the supply of women teachers in order to improve girls' access to schools. Consistently the data show that a low percentage of women teachers accompanies a low enrollment of girls in school (Tietjen, 1991). The presence of women teachers in schools can be a critical factor in parents' decisions to send their daughters to school. In environments where sexual harassment and gross misconduct by male teachers is not uncommon, the mere presence of women teachers is essential for girls' safety and comfort and for parents' peace of mind. Yet at present, where no prohibitions barring women from teaching exist, only 33 percent of teachers at the primary level in the developing world are women. Percentages are significantly lower in specific areas, such as Nepal, where fewer than eight percent of primary school teachers are women, and in Africa, where women's representation in the profession is significantly lower than elsewhere in the developing world (Cummings, 1990; Zewide, 1994). National patterns reveal that more women teach in urban than in rural areas but that the positive impact of women teachers is more notable in rural areas where far fewer women are available to teach (Bellew, et al., 1992).

Despite the argument for women teachers as a reassuring presence for parents and for girl students, the qualitative research studies cited above offer convincing evidence that the mere presence of women teachers does not contribute to a girl-friendly learning environment. In fact, women teachers can create an environment of discouragement just as easily as men teachers. The GAP highlights the importance of involving teachers in the process of change, allowing them to examine gender attitudes and classroom practices that are harmful to girls rather than simply hiring more women teachers. The GAP also focuses on the importance of examining classroom interactions for developing gender-sensitive education policy.

At a broader level, policymakers and education ministries must also engage in three major tasks, according to a study of women technical teachers in Benin, Ivory Coast, Mali, and Senegal. The study concludes that to effectively recruit more women into the profession, related institutions must introduce policies that speak directly to gender issues and that create an environment that is more responsive to women; develop plans that address unfair working practices such as class loads, hours of teaching, and opportunities for staff development; and aggressively address the general inequities that exist at the primary and secondary level (Perez, 1994). Similarly, Bellew, Raney, and Subbarao (1992) argue that schemes to attract more women into teaching, such as, local recruitment and posting, tutoring, stipends, and transportation allowances, concomitantly must address the quality of education for girls.

Mapping Backward from Classroom to Policy

A key aspect of the GAP is that policy development and decision-making are grounded in

classroom practice. With a more traditional approach to policy development and implementation, efforts begin at the macro-level (national, district, state, and regional) and descend to the micro-level (community, school, and classroom). This trickle down approach assumes that central government initiatives lead to changes at the district and school levels. Research on the process of implementing change in educational systems shows, however, that change does not occur in this manner. Because of the "loose-tight coupling" found in most educational systems, educational policy decisions, as they move from the macro to the micro level, exert increasingly less formal control on what happens. Indeed, research has found that there is a lack of formal control on student socialization and teacher daily activities (see Farrar, 1980). Rather than effecting change in a tightly controlled manner, a top-down approach actually places a premium on system adaptability. Given the shifting political nature of educational systems, top-down policy formation and implementation serves more as a shock absorber than a spark for educational change.

A more dynamic and participatory process of policy dialogue and implementation defines policy formation as an ongoing process in which all stakeholders press for a particular vision of policy based on their interpretations of the needs of the education system—particularly those they identify at the school and classroom level. GAP embraces this process and grounds it in a gendered perspective framed on the needs of the students, teachers, and the entire educational system.

Policy initiatives driven by this school and classroom perspective use classroom practice and information from the school environment as the beginning point for decision-making. Reversing the traditional approach to policy requires "mapping backward" from the classroom to policy development at the "top" or the central level. Elmore (1979) writes that:

> The process of framing questions from the top begins with an understanding of what is important at the bottom. The logic of backward mapping connects policy decisions directly with the point at which their effect occurs and is the point at which administrative actions intersect private choices. (p. 604)

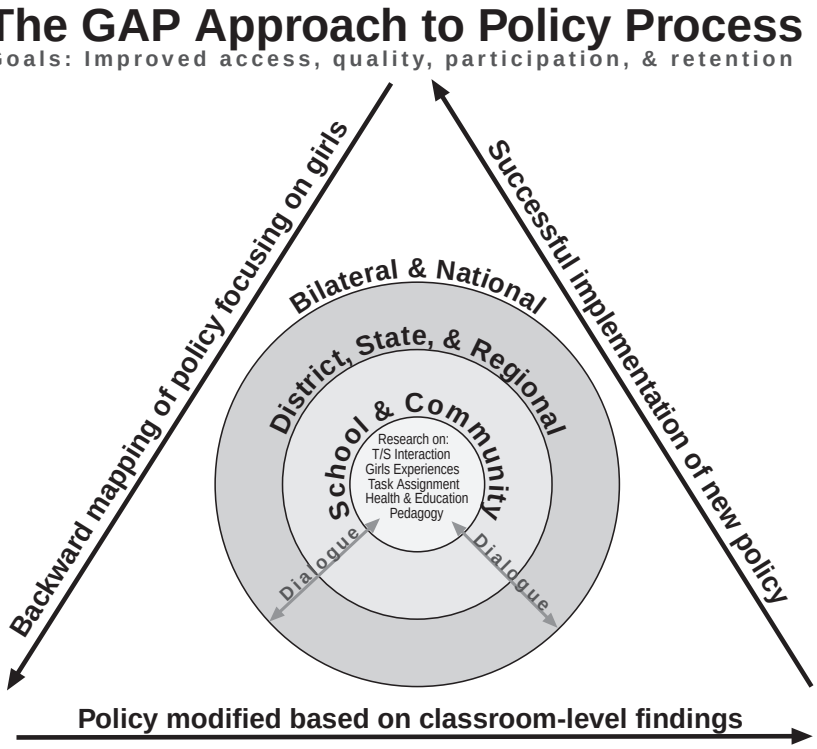
Backward mapping begins with identification of the specific need at the lowest level of the implementation process that generates the demand for a policy or specific targets for change—in this case the school and classroom. Desired changes in the system—in both physical conditions as well as behavior changes—are identified and written as objectives. These objectives are first defined by organizational operations and then as a set of outcomes or effects. With the targets identified at the lowest level of the system, planning moves backward through the implementing structure and at each level answers several critical questions:

- What are the units that work at this level that may have an impact on the specific targets or policies that are being changed?
- What influence does this unit have on the targeted behavior?
- What resources are needed in order for this unit to have that effect?

Regulations are then defined that direct the required resources to those units that will have the greatest impact on achieving the desired changes.

Several key concepts are inherent in the practice of backward mapping. The process of identifying the desired changes and concomitant resources to accomplish them is of primary importance. Policies in and of themselves are secondary, and are potential targets of change. Backward mapping builds on the discovery that decisions do not enact themselves, and that lasting change will not occur if people at all levels do not understand the need for changes and the mechanisms required to implement them. Finally, backward mapping maximizes the impact of "street level"

discretion—the individuals working where the problems are the most immediate have the greatest potential to influence resolutions to the problems (Weatherly and Lipsy, 1977).



For backward mapping to lead to successful implementation of policies and changes in the system, it is essential that decisionmakers at the upper levels be able to assess the abilities and actions of those working in the lower levels. Therefore, in order to achieve identified targets, backward mapping demands two things: more and better information about the conditions and actions of individuals at the community, school, and classroom level; and an interactive mechanism whereby individuals at the school and classroom level can participate in decision-making. Because backward mapping makes school personnel of primary importance in implementing educational innovations and policy changes, the roles of the players working at the school and classroom level in particular must be redefined for it to succeed. (See graphic.)

Weinshank, Trumbull, and Daly (1983) identify four factors that foster role redefinition of personnel working at the school level. They write that school-level personnel must have: the availability of time to plan, implement, and evaluate innovations; the encouragement of collegial involvement and cooperation; the development of professional links between schools; and the availability of long-term administrative support. Elmore (1995) further stresses that successful reforms must focus on changing knowledge and skills at the school level that impact student outcomes.

From the perspective of GAP, a teacher's reflection on the pedagogical and sociological exchanges taking place in the classroom is particularly critical in reshaping the kind of classroom environment to which girls are exposed from an environment of discouragement to an environment of validation. Teacher self-examination of beliefs and attitudes, interactions, and expectations becomes the point where they begin to map backwards through the gap. Working with educational researchers and classroom ethnographers, teachers and head teachers identify and map gender sensitivity in their schools and their classrooms within those schools. This qualitative classroom information then forms the basis for policy development and implementation. The success of the policies are evaluated in terms of what the results are for the girls.

An example of this kind of school and classroom level based research is USAID's Improving Educational Quality Project (IEQ). IEQ is a country-specific approach that critically examines how reform efforts lead to improved quality of education. IEQ measures what teachers

and pupils do in the classroom, that is, it gathers and uses information about instructional practice and pupil performance at the school and classroom level in order to improve teaching and learning. IEQ works with host-country educators and researchers to design approaches for capturing the classroom experience. The IEQ combines qualitative and quantitative methods to learn about the quality of the classroom experience: measures of academic performance; interviews with pupils, parents, teachers, and community members; and direct observation of classroom behaviors and experience. Teams of local researchers, with support from core staff, visit schools to collect the information.

IEQ uses information gleaned from the classroom research to provide information to policymakers, structure the policy dialogue, and to focus attention on specific opportunities for improving teaching and learning. IEQ does this through conferences that present evidence about the classroom experience and the extent to which national policies and goals are reaching the classroom. IEQ also feeds information about the classroom into the decision-making process by developing curriculum-based assessment materials and training workshops. (IEQ, 1996).

The important difference from the school and classroom level research that IEQ undertakes (and that was cited earlier) is that IEQ uses an ongoing, iterative process of examining what takes place at the school and classroom. Unlike research that examines a specific topic within a defined time period, IEQ gathers data continually and uses it, as previously discussed, to inform decisionmakers about ways to improve teaching and learning. Moreover, as questions are answered and used in planning, IEQ then redefines the research question, poses new questions, and uses both as the basis for further data-gathering.

Examples of how IEQ's school-level data collection has influenced policy formation comes from Ghana. In contrast to the amount of time it took IEQ to effect change at the policy level, its impact in schools and classrooms was seen quickly. Within the first phase of IEQ's work in Ghana, teachers and head teachers indicated that they had made changes in their daily interaction in the classroom. They noted that they had a better understanding of the students, had changed their methods of instruction and assessment, and had become more involved with parents in the community. The teachers also noted that circuit supervisors were incorporating information that they had gotten from IEQ seminars and workshops into their visits and feedback with teachers.

Tracing the impact of the IEQ studies on textbook distribution and utilization in Ghana best demonstrates how effectively the school-level research and data have been used to change policy and practice (Okyere and Harris, 1996). In 1993, IEQ's Ghanaian counterpart institution, the Centre for Research on Improving Quality of Primary Education in Ghana (CRIQPEG), housed at the University of Cape Coast, began investigating sources and uses of instructional materials in classrooms in Ghana. Their findings shed light on distribution patterns for the textbooks, the use of books in the classroom by teachers, the ability of students to use the textbooks at school and at home, and the manner in which books were being cared for. In general, they found that students had limited access to the textbooks at school as well as at home in part because teachers feared that they would be held accountable for damaged or lost books. Rather than allow students to use the books at their desks, teachers wrote passages on the chalkboard and asked students to read chorally and then copy the words into exercise books. The researchers also found that when textbooks were distributed to students, they tended to be given to higher achieving pupils.

Analysis of the data also provided information on students' ability to use the textbooks. The analysis also reviewed how effectively the teachers were able to cover the textbook material during the course of the school year. Their findings showed that students in the schools participating in IEQ interventions for reading

and language instruction had fewer problems using the textbooks and that the materials being used in the classroom were closer to the students' instructional level. This finding was also true of students in urban areas. In contrast, nearly 75 percent of the students in rural areas were frustrated with the materials, found the vocabulary too difficult, the passages too long, and the concepts outside their realm of experience. Because of the high level of students' frustration with the reading materials, many teachers slowed instruction and covered less of the text in order to boost student comprehension and mastery of the skills, in some cases covering less than half of the material.

Emerging Themes	Girls	Boys
Teacher to pupil positive reinforcement*	33	40
Teacher to pupil negative reinforcement	21	0
Cleaning sweeping floor/wiping blackboard	5	0
Passive engagement (speaking softly, gingerly raising hand to ask questions)	19	3
Number of interruptions during reading assessment**	37	16
Gender representation of teachers	fewer women; more women teach in lower primary grades	more men; more men teach in higher primary grades

* Teacher interactions that were tabulated were those that were perceived as either being positive or negative reinforcement of student performance. Interactions that were perceived as being neutral were not included. Tabulations in which students were not given any reinforcement are also not included in these two categories.

** One videotape was of a teacher administering a reading assessment to students in his classroom. The assessment was administered to each student individually. The two cases being compared here are the most extreme examples of a girl and boy pupil being interrupted by the teacher in order to assist them. In each case, the student level of reading fluency and word attack skills are at an equivalent level.

Subsequent recommendations emanating from the IEQ research were introduced into the system both through policy changes and influence on instructional practices, including:

- Identifying the instructional practices and strategies of teachers who cover more of the texts, and introducing these strategies into the pre-service and in-service programs;
- Introducing peer tutoring and group learning that pairs higher achieving students with lower achieving students;
- Developing remedial materials for students who lack the skill to succeed with the available instructional materials;
- Training teachers in student assessment and strategies to monitor student performance and skill level;
- Changing textbooks to be more culturally relevant and to use more vocabulary-building exercises and illustrations;
- Training head teachers on the care and use of books;
- Developing a policy on textbook usage at home and resupply of textbooks.

An example of the way the IEQ data has been used to provide more information about the classroom experiences of girls is an analysis of 15 IEQ videotapes of classrooms in Ghana, Mali, and Guatemala. Critical incident analysis was conducted to determine how classroom experience is defined and influenced by gender (Sey and VanBelle-Prouty, 1996).

Both men and women teachers initiated interactions with boys with more frequently than they did with girls. In the majority of Ghanaian classrooms, teachers called on boys twice as often as girls. Boys received positive reinforcement each time they took part in an activity. Boys always received positive reinforcement for correct responses. In contrast, girls answered correctly 33 times without any positive reinforcement. In no case did a boy receive negative reinforcement, whereas teach-

ers frequently reprimanded girls for their incorrect responses or supposed lack of engagement.

Expectations that boys perform better than girls were also evident. Frequently the tapes show teachers intervening to help girls while the girls were still completing the task. In the example in the table, a girl was interrupted, corrected, and helped 37 times, while a boy was interrupted 16 times. While this is a large disparity, it nevertheless underscores the generally low expectations that teachers have for all students. This evidence supports Chesterfield's (1996) findings in his work in Guatemala for teachers' low expectations of student learning capacity and engagement.

The videotapes underscore the fact that girls are often ignored and overlooked by their teachers. Part of this is because girls are less aggressive learners and take part in classroom activities timidly, speaking softly even when giving correct answers, leaving the impression that they are unsure of the answers and what they know. In contrast, boys in the classroom raise their hands high demanding teachers' attention. Boys also give answers—even incorrect ones—in a more confident, self-assured manner.

During a math lesson in a fourth year primary classroom, the interplay between teacher interaction, reinforcement, and student engagement was poignantly observed. As the video camera spanned the classroom, a boy aggressively waved his hand high, jumping up and down in his seat to attract the teacher's attention. The teacher called on him and loudly said, "Fine" when the boy gave the correct response. The teacher then called out another math problem, and a girl, who had also been holding her hand high, was chosen to answer the question. Her response is incorrect and in an loud voice the teacher said, "Wrong." Almost immediately, a third student, another girl who had also been aggressively taking part in the lesson, pulls her hand down towards her face, but not before the teacher notices her hand as it was held high above her head. He called on her and she timidly gave the correct response, after which the teacher said nothing before calling out another problem and selecting another student to answer. Throughout the remainder of the class period, the girl, who had given the correct response but received no positive reinforcement for her correct answer, continued to engage in the lesson passively. The girl who had also been actively engaged in the lesson, but who gave an incorrect response, did not attempt to answer another question during the lesson.

Girls have fewer instructional materials, textbooks, and school supplies. More girls come to school without uniforms. Girls also do the greatest share of classroom tasks such as sweeping the floor and cleaning the blackboards. On one tape, a young girl cares for a toddler who sits beside her at her desk as she tries to perform her classroom tasks and engage in learning activities.

A second example of the contribution that IEQ has made to a better understanding the classroom experience of girls is a study conducted by Ugandan researchers at Makerere University. This base line study of factors influencing effectiveness in primary schools show that girls' interactions with teachers and the overall percentage of their participation in classroom activities decrease dramatically as they move into the higher grades, considerably widening the gap with boys by the time they enter their sixth year (Carasco et al., 1996).

Preliminary findings from an analysis of an IEQ study in Ghana demonstrates the value that classroom data can have in supporting effective teaching. This study compares the performance of girls and boys in schools that have relatively equal gender patterns against those with schools that have unequal gender patterns. Data for this study was collected through classroom observations, pupil observations, pupil performance testing, and interviews with parents, teachers, head teachers, and relatively high and low performing boys and girls. The research found that teachers and students in gender equal classrooms used English more. Students in gender equal schools scored significantly higher on

aided reading, reading most used words, and copying letters correctly. They also had higher levels of listening comprehension and demonstrated better understanding of the concepts of print (Okyere, Cahalan and Harris, 1996).

The IEQ experience in implementing this classroom-based research approach demonstrates that it takes time to introduce a research-based planning process into the system. The turnaround period to complete the cycle of collecting information, analyzing the data, identifying needs and, finally, influencing policy and decision-making, is lengthy. And, unfortunately, the IEQ experience also shows that the time required to convince policymakers that information gleaned from this process provides critical information needed for planning is even lengthier.

Schools Are Places for Girls: Illustrative Examples of the GAP

An approach to policy formation that begins and ends with what is going on for girls in the classroom necessitates analysis of qualitative classroom and school data about the quality of girls' schooling. There are three dimensions to this approach. First is the need to map backward to policy. Second is the need for the qualitative classroom data that provides the information for the backward mapping. Third is a better holistic understanding of girls' educational experiences.

This focus on the girls—not simply add-on programs but programs designed around girls—has shown remarkable success in several projects where it has been tried. Among the programs we analyzed that comes closest to being a successful GAP program is Guinea's Equity and School Improvement Program (ESIP). Designers analyzed and adapted every component of the program based on its impact on girls' participation. ESIP includes an extensive textbook component, school health and nutrition interventions, and a school-based, teacher-designed in-service training program (World Bank, 1995). A community-based cooperative program between UNICEF and the Ministry of Education in Egypt is a second initiative that incorporates aspects of the GAP. This project demonstrates that success for girls also means success for boys (UNICEF, 1994). Malawi's Girls' Attainment in Basic Literacy and Education (GABLE) program, a bilateral effort of the Ministry of Education and USAID, is a comprehensive initiative including curriculum revision, scholarships, and a community-based social mobilization campaign aimed at identifying constraints to girls' education and finding solutions (Robb, 1994). Also included is the pan-African think tank and advocacy group, the Forum for African Women Educationalists (FAWE). A final section will outline key characteristics of a girl-friendly school framed by the GAP. (For an overview of a professional development approach to improved learning for all students similar to GAP see McDiarmid, 1995.)

Guinea's World Bank Equity and School Improvement Program

One of the initial actions of the First Republic of Guinea was to introduce positive discrimination policies that set lower standards for females to enter secondary school and established a quota for female students at the university. However, these educational policies met with a great deal of resentment as an unfair enfranchisement, and were abandoned shortly after the regime ended in 1984. Therefore, they netted only marginal impact in terms of girls' and women's educational opportunities. Consequently, Guinea has one of the lowest gross enrollment rates forgirls in the world. The gross primary enrollment rate for girls in 1994-95 was 29 percent compared with 57 percent for boys. A recent public expenditure review shows that females receive a per capita education subsidy that is about half of that received by males. In rural areas the gap is even greater with females receiving only 43 percent. Even though over

half of school age children live in rural areas, less than 20 percent of students enrolled in school at the primary level live in rural areas.

But the Government of Guinea is committed to change. With assistance from USAID, the government has established a Commission on Equity with the primary responsibility for developing strategies to increase girls' and rural children's school participation. In support of these efforts, a series of studies was funded by the World Bank, one of the first nationwide studies of girls' education of its kind in sub-Saharan Africa. Three of these studies provide an overview of the sociocultural and health factors affecting girls' schooling in Guinea. The first was a household survey of barriers to girls' schooling. Second was a five-month qualitative study that focussed on the classroom experiences of girls from 32 rural villages. A team of researchers, including Guineans who were native speakers of the languages used in each region, observed classrooms in 17 schools in five regions of Guinea. A third study examined health-related factors, including an intestinal parasitism survey in school age children in two representative regions of Guinea. Some of the major findings from the two studies are summarized below.

In most homes fathers assume the responsibility for schooling costs. However, in polygamous households mothers not only pay for their children's educational expenses, but they also provide a great deal of emotional support for continue schooling. Mothers in all households had a critical role in determining whether a girl stayed in school. Factors that influence a mother's decision included responsibilities in the household chores and the daily division of labor. Mothers tended to focus on their immediate subsistence needs rather than the longer-term economic benefits of schooling their daughters. The research found that household chores and domestic responsibilities posed such a burden that nearly 40 percent of girls who dropped out of school early indicated this as the cause second only to marriage (57 percent).

In general, most of the parents, who themselves were unschooled and illiterate, were happy if either a son or daughter were successful at school. However, it was most parents' perception that sons were more likely to succeed in school and that education was the right of boys but a privilege each girl had to earn. They were also convinced that sons were leaders and courageous whereas their daughters were weak and in need of protection. Because of these expectations, girls' educational and future career options seemed to present more negative examples than positive ones and failed to counterbalance the opportunity cost. Additionally, because parents (particularly rural parents) see far more examples of girls who have been "corrupted" by school rather than those who have been able to leverage education into successful careers that eventually provide financial support for their parents, fears for their daughters' safety become paramount.

Poverty is the primary household barrier preventing girls from attending school. This includes both direct and indirect schooling expenses as well as bride price. Although basic school tuition is free in Guinea, other costs can be substantial, totalling more than US$18 per year for a first grade student. Because of the cost of school uniforms and a few other incidentals, girls' schooling costs tend to be higher than that of boys by nearly US$2, a considerable sum for families that have a yearly per capita income of less than US$537.

Early marriage and bride price are significant factors influencing a girls' enrollment in school. The findings from this study do not show that parents fear their daughters would be less marriageable with too much schooling or demand a lower bride price. However, they do show the widespread belief that school attendance affords girls greater freedom and greater risk for unwanted pregnancies, which leads to parental "humiliation." Therefore, early marriage is seen as an honorable alternative to school, and one that prevents daughters from having children out of wedlock.

In Guinea as well as in many developing countries, the simple fact of being a girl can constitute a severe handicap. At all levels of the educational system, girls daily perform chores (sweeping, mopping, carrying water) that boys perform weekly, occasionally, or as punishment. And although girls were often the minority in the classroom, they performed the majority of the chores, frequently during instructional time that they were never able to make up. Hence, since these tasks were also assigned as punishment, girls were repeatedly and implicitly being punished for their gender.

The research also found that the household chores that girls complete before leaving for school dramatically affect their absenteeism and tardiness. All but five percent of the girls attending school helped their mothers with household chores, with nearly 55 percent helping on a daily basis. Over 50 percent of the girls indicated that they frequently came to school late because of these chores, which included gathering wood, fetching water, farming, watching livestock, and preparing food. They are expected to care for their siblings and family members who may be ill. In some areas of Guinea girls must practice some kind of commerce such as selling fruits or vegetables. These responsibilities pose a double hindrance and tension because of the time they take away from in-school or homework time, or the foregone earnings and support for home responsibilities that their parents lose when their girls are in school.

Research demonstrated that health factors can have a significant impact on what students are able to learn. Overall nutrition and viral, bacterial, and intestinal infestations (such as malaria, worms, and dysentery) can all negatively influence a child's physical and cognitive development and overall learning potential. Findings have shown that girls frequently are at greater risk than boys for malnutrition and receive less medical attention when they fall ill.

The Guinea survey found that girls who attended school had a significantly lower percentage of intestinal helminth infection than girls who did not attend school. Although no statistical difference was noted by gender for urinary schistosomiasis, children who were enrolled in school had a significantly lower prevalence than children not enrolled. Parasite prevalence most significantly correlated with region, even more than gender, age, or school attendance. It was also found that helminth infection levels were much higher than suspected and posed a serious threat to the health and well-being of the children who were tested.

These findings, in addition to the others from the study series, provided a framework that both the Ministry of Education and World Bank used to develop girl-sensitive policies and program initiatives. The resulting policy and educational initiatives addressed a wide range of issues from the cost of schooling, to the availability of school places, to the sociocultural factors influencing access and participation. They include:

- Reduction of direct costs of schooling through tax relief for families whose children are enrolled, and abolishing the compulsory uniform regulation.
- Construction of labor saving devices such as wells and mechanical mills that will reduce the burden of household chores that girls are expected to perform.
- Increasing the availability of school places through a continuation of school mapping, which provides for strategic placement of schools and incentives programs to entice teachers to accept placement in rural schools.
- Regulations that address school-related chores, identifying the hours when students are allowed to engage in these activities, and developing guidelines that encourage participation of all students—both boys and girls. Also, legislation that outlaws fees that are levied on students, student labor in teacher fields, or errands.
- Legislation that makes it unlawful to force a girl into marriage before the ninth grade.
- School infrastructure improvements, includ-

ing construction of separate latrines for girls and boys, expansion of multigrade classrooms, and provision of seats and tables.

Activities in the World Bank program that uniquely respond to the schooling needs of girls include:

- Provision of an initial textbook stock that ensures that girls are provided an equal access to learning materials. This activity provides support for distribution of textbooks through private sector and NGO groups. It also involves the participation of school-community parent groups to oversee the distribution of textbooks for a five year cycle.
- Distribution of nutritional and intestinal supplements. (World Bank, 1996a & 1995b)

Egypt's Community School Project

The hamlet region of Upper Egypt is where nearly 30 percent of the county's population live. The communities there are isolated and lack many services found in larger towns, including electricity, schools, and health clinics. Although government policies support the education of girls, participation rates are extremely low due in large part to cultural and traditional values that place low value on formal education for girls and that encourage seclusion and high security for girls.

In early 1992, UNICEF and the Ministry of Education began an initiative in this area that targeted girls and small, rural communities without primary schools. Later in the year, four community schools opened serving 121 students. By May 1995, 34 community schools opened with an enrollment of over 1,000 students. Several guidelines framing the initiative included:

- The central role of communities in the construction and management of the schools, which reflected the values and incorporated the inputs from the local communities;
- The partnership of local NGOs to contract the local personnel (support staff, carpenters, accountants, administrative staff, consultants, trainers, etc.) working at the community level;
- The utilization of a more child-centered approach of organizational learning, framed around concrete experiences and ongoing self-evaluation;
- An equivalent program to the full primary school program organized around self-instructional materials in multigrade classrooms within a revised school schedule;
- Local facilitators who were all young women holding a diploma, and who were selected by a community school committee;
- Long-term efforts to establish an approach that would be sustainable and provide for ongoing expansion and large scale implementation.

Reorganizing and restructuring the curriculum, the instructional techniques, and instructional materials (including classroom furniture) and facilitator training were fundamental principals of this initiative. In order to place high priority on learning achievement, student evaluation procedures were a critical component. A modified form of continuous assessment evaluation was introduced in which samples of student work and facilitator records were filed for each student. Another feature that promoted student learning was the introduction of student interaction patterned around cooperative learning approaches that place a premium on developing social awareness, peer support, and cooperation.

Preliminary evaluation of program impact indicates that the project is on track and that dramatic changes in attitudes about educating girls are taking place. The empowerment of the community by giving it a vital role in the decision-making and ongoing implementation is having tremendous impact, and is acting as a catalyst for other changes, including increased democracy and governance, self-reliance, and social justice. Notably, women have assumed a

more active role on school committees and as facilitators (UNICEF, 1995).

Malawi's Girls' Attainment of Basic Literacy and Education (GABLE) Project

Malawi is one of the poorest countries of the world. Despite strong economic growth during the 1960s and 1970s, severe drought, widespread poverty and food insecurity, and a large influx of refugees from neighboring Mozambique contributed to economic downturn and destabilization. A second 10-year plan, initiated in 1985, placed heavy emphasis on expansion and quality improvements of the primary education cycle.

In 1991 the Government of Malawi began an initiative to increase the participation of girls in basic education. This project, which received funding from USAID, combined budgetary support, technical assistance, and policy reform to identify constraints that limit girls' opportunity to attend and succeed in school. The primary goal was to decrease fertility rates in the country by improving girls' access to education. This initiative combines non-project assistance (budgetary support to governments that is disbursed in tranches upon fulfilment of mutually established conditions), and project assistance in support of technical assistance and research.

Shortly after GABLE began, the Government of Malawi announced a fee waiver policy for non-repeating girls in Standard 1 and later phased in for Standards 2 and 3 in subsequent years. This initiative increased Standard 1 enrollments by 40 percent in the first year and in the 1992/93 school year, the number of girls enrolling in Standard 1 exceeded the number of boys enrolled in school. Fee waivers for non-repeating girls also had a positive impact on their persistence in the higher standards.

School fees were completely abolished in 1994, which resulted in a substantial increase in enrollment from 2 million in 1994/94 to 2.9 million during the preregistration period the following August. Support was also given to the ministry for the development of a pupil registration system. A major component of the GABLE program was a community-based social mobilization campaign. This initiative utilizes marketing and publicity techniques in conducting research, and the generation and dissemination of information concerning girls' education. Specific activities included in this initiative include participatory theater for development, focus groups, music festivals, training of community leaders, radio dramas, and the distribution of posters, T-shirts, readers, calendars, etc.

Part of the social mobilization campaign focuses on the development by community target groups of action plans that address the constraints to girls' education in their community. A key ingredient for the program's overall success is the participatory way base line data is gathered through the use of knowledge, attitude, and practices (KAP) studies, and then transformed into village awareness drama productions through the Theatre for Development component. This process further feeds into the community action plans that are later developed.

A full revision of the primary curriculum was completed. A Gender Appropriate Curriculum Unit was established at the Malawi Institute of Education to ensure that revision work would be ongoing and that a gender specialist would be employed as a lecturer in the pre-service teacher education program. In addition, the gender specialist would be responsible for gender training workshops for personnel at all levels in the ministry. This unit also serves as a gender-focussed policy unit that evaluates the gender sensitiveness and appropriateness of ministry policies and regulations.

GABLE has supported a wide array of research at both the community and school level. GABLE has funded studies that examine how supply side factors such as availability of school places, teacher attributes, and the quality of schooling affect a girls' access, persistence, and performance in school. Classroom ethnographies have identified classroom practices that limit the educational experiences of girls. School

expansion has not matched increases in student enrollment that followed the school fees waiver, and classrooms in both urban and rural settings frequently average more than 100 pupils per classroom particularly in the lower standards. Additionally, because of the lack of space and inadequate numbers of schools, many classes are forced to meet outdoors.

In an effort to improve the quality of education in multiple shift classrooms (both end-on and overlapping shifts) GABLE funded a pilot study that introduced double shifts in urban schools where high demand for schooling and overcrowding are particularly serious problems. An innovative approach that is also being pilot tested is the creation of single sex gender units for math and science instruction in coeducational schools (USAID, 1994; World Bank, 1996).

Forum for African Women Educationalists (FAWE)

In 1992, FAWE was founded and organized as an international NGO in Nairobi, Kenya. FAWE's organizing principles reflect the concepts of the GAP, framing educational decision-making through the telescope of the needs of girls and women. Initially FAWE was organized under the leadership of the Association for the Development of Education in Africa (DEA) through the girls' participation working group. It began with nearly 40 women in high-level positions including ministers and deputy ministers of education, and vice-chancellors of universities, and was established primarily as a think tank and advocacy group that would concentrate on the discrepancies in educational opportunities for girls. Although FAWE has a primary goal of leveraging policy decisions that focus on gender issues, it has a broad agenda that is centered on four key areas:

- mainstreaming gender concerns into national education programs;
- convincing society, governments, donors, and NGOs of the need to invest more resources in girls' education;
- supporting women administrators, researchers, and teachers so that they can positively affect female education; and
- integrating gender studies into tertiary research, curriculum, and policy decisions. (Stromquist, 1994)

In addition to supporting research that examines girls' access, FAWE has also been instrumental in sponsoring gender-sensitization workshops with high-ranking ministry officials throughout Africa. It has also given priority to efforts to revise curriculum and instructional materials for gender bias and stereotypes.

Conclusions on Creating a Girl-Friendly School Environment

When gender becomes the lens through which educational planning is done, the school environment will become more girl-friendly. A summary of the fundamental concepts used in this approach—concepts that affect both quality of instruction as well as learning conditions—are summarized below.

Drawing from the iconoclastic research of Wheeler et al. (1989), it is clear that the bulk of resources (time, energy, financial) put into traditional in-service teacher training is misdirected and demonstrable fails to have an impact on student performance. Effective approaches to school-based staff development require a fundamental change in the structure and substance of staff development. Instead of the approach used in most systems, where classroom teachers attend training sessions during their vacation breaks, or are taken out of their classrooms to attend off-site training modules, school-based programs place priority on teacher reflection and auto-evaluation of the teaching and learning process occurring in their classroom. This approach is effective, whereas mere knowledge of new instructional techniques and learning theory do not result in spontaneous attitude and

behavior changes. Changes occur as part of a learned process that is best accomplished in an interactive learning situation. The process demands not only technical skills, but also a rethinking of old ideas and fundamental concepts. It also requires the development of a larger learning community that includes intra- and extra-school exchanges that encourage teachers to learn from one another's successes and failures. This approach both frames staff development in the immediacy of the classroom and does away with the lack of exchange in skill and knowledge that characterize traditional in-service training and staff development between teachers at the school. (See Wheeler et al., 1995, for a discussion of a school-based staff development program in Thailand; Joyce, 1990; Tatoo et al., 1991.)

Although economics and finance will remain salient aspects of educational planning, they should not be the primary force behind decision-making. Instead, a paradigm shift to pedagogical decision-making framed by what is known about constructivist theories of active learning and teaching is needed. Currently, research findings about cognitive development, metacognition, learning theory, learning and teaching styles, and deep structure learning in the development of curriculum and learning materials is underutilized in most developing systems. During the past decade an enormous amount has been discovered about how children learn (both girls and boys), and the findings from this research need to be better incorporated into the program. In most cases this will mean significant changes in the way resources are allocated in addition to a fundamental difference in the way students and teachers interact in the classroom to create meaningful learning experiences. (Armstrong, 1994; Harmin, 1994; Johnson, et al., 1994; Marzano, 1992; Marzano et al., 1988; Sylwester, 1995)

Although efforts should focus on improving the quality of instruction, there is also a continuing need to lower direct and indirect costs of schooling for girls through scholarships, fee waivers, abolishment or reduction of the cost of school uniforms, etc. Easier access to schools is also needed by better identifying (through improved school mapping techniques) where schools are most needed, and using multigrade classrooms, and double streaming effectively.

Developing gender-neutral classroom environments and instruction through use of single sex gender tracks, gender free instructional materials and curriculum, gender appropriate facilities (including sanitation and water facilities), security walls, etc., remain a high priority. Additionally it is essential to ensure that girls are provided equal access to textbooks and instructional materials and equal opportunity to take part in classroom activities.

There is a growing body of literature that consistently demonstrates the tremendous impact that health has on the learning potential of children. It also notes that girls are often in poorer health than boys (parasite infestation, chronic ill health from respiratory infections, and other infectious diseases) and have a higher level of hunger and malnutrition. Initiatives that improve student health and nutrition through feeding programs and vitamins, and intestinal and nutritional supplements can be particularly beneficial to girls because of their more marginal health status. The beneficial impact of these initiatives are increased when coupled with health education courses that underscore the value of good nutrition, improved personal hygiene, and reproductive health. (ABEL, 1996; Brown & Pollitt, 1996; Israel, 1996; Levinger, 1994, 1996; USAID, 1996)

Programs and policies need to foster school-community partnership and extension programs that promote girls' education, such as community mobilization and awareness programs, introduction of labor saving devices, and establishment of daycare and preschool centers for siblings. Efforts to enlist community networks to advocate girls' schooling underscore the necessity to garner parental input into not only the identification of barriers and constraints

to girls' education, but also to identify solutions to these issues as well (Robb, 1996 and Kane, 1996). This is particularly important since parents make rational decisions based on financial strains and concerns over what appears to be in the best interest of their daughters.

Initiatives will not be sustainable without a responsive policy framework that focuses on gender-specific needs. Policies that have demonstrated a significant impact on girls' access and participation in schooling include pregnancy polices, flexible scheduling and programmed learning, minimum / maximum school entry regulations, local language of instruction, and tax relief for parents who send their daughters to school. Policies are also needed that address the irrelevancy and external inefficiency of education for girls and women to limit parental resistance to investments in girls' education.

Finally, efforts need to buttress the policy framework and decision-making processes through school level data collected through qualitative and ethnographic studies that focus on teacher and student performance.

King and Hill (1991) write that "improving the overall quality of education may be the most productive investment for attracting girls to school and keeping them there." Therefore, the more gender-based activities and initiatives are centrally framed in the overall reform effort, and the more grounded into effective learning theory and instructional practices, the greater the probability that sustainable long-term change will occur.

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